POWER AMPLIFIER

KM-X1

SERVICE MANUAL

KENWOOD

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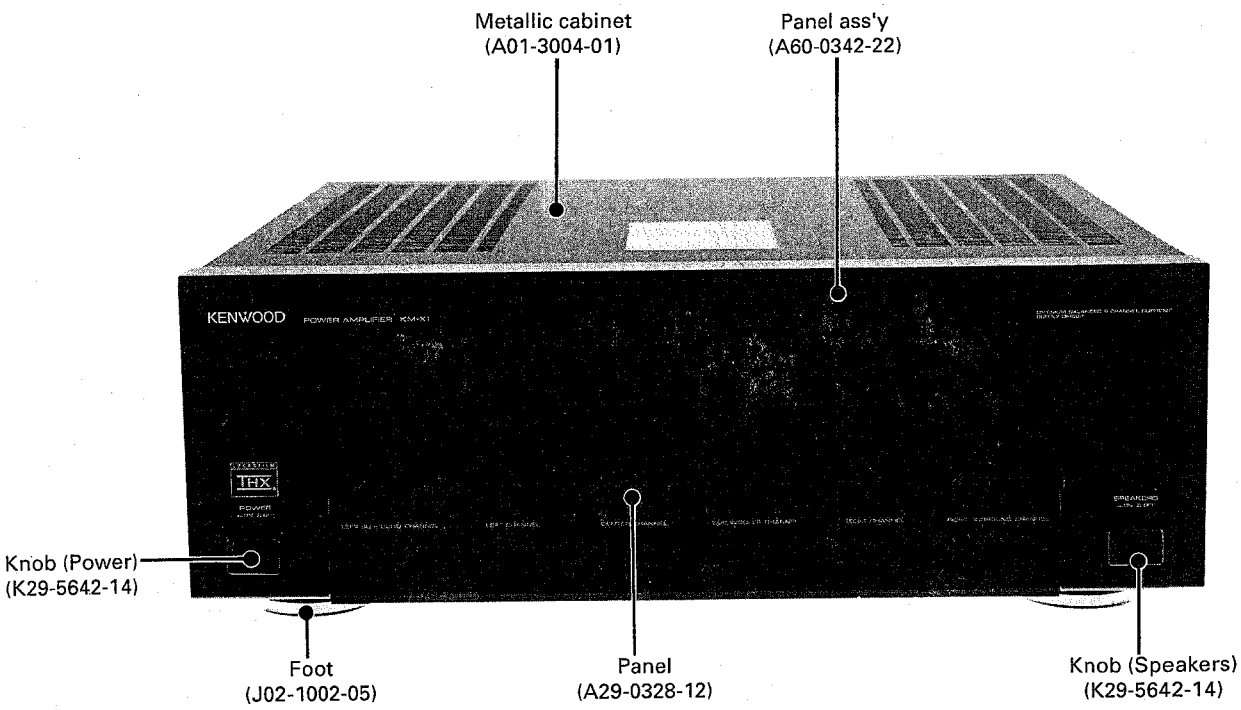

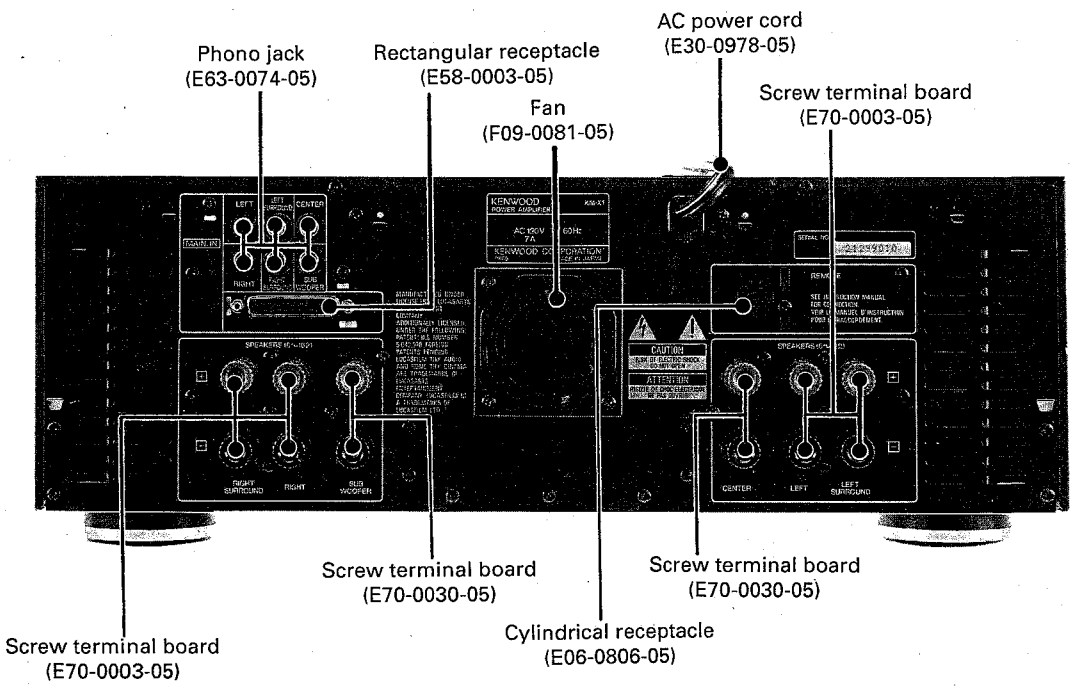

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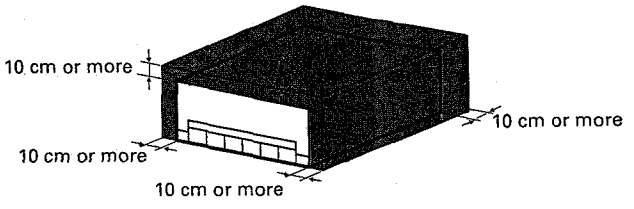
Caution on heat generation

- This unit incorporates a cooling fan on the rear to deal with the large amount of heat generation. The fan starts rotation automatically when the internal temperature of the unit rises. Install the unit taking care not to block the ventilation (heat radiation).
  * Reserve clearances of more than 10 cm on the left and right, behind and above the unit. When the unit is installed in a rack, do not close tight with a door.
- The cooling fan of this unit is designed to absorb external air. If curtain or sheet of paper is attracted to the unit, the internal temperature may rise, and the sound may not be produced when the protection circuitry is activated due to temperature rise. Please be careful against this.

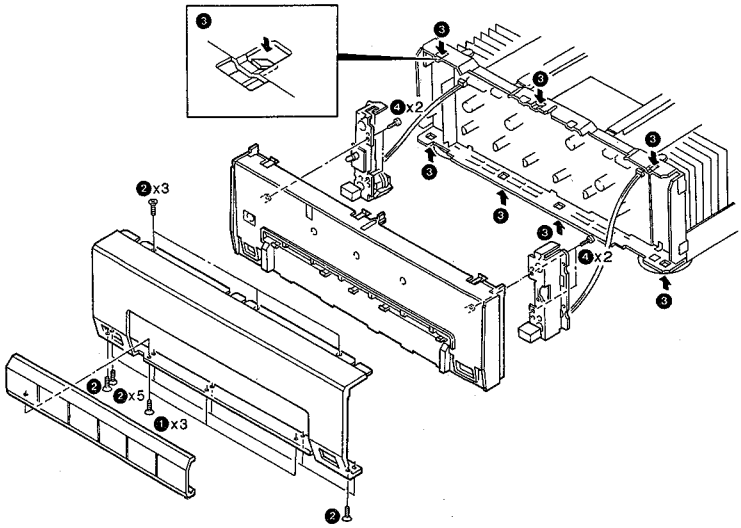
To allow heat radiation, leave a space, shown with ▬ between this unit and the walls or rack shelves.



DISASSEMBLY FOR REPAIR

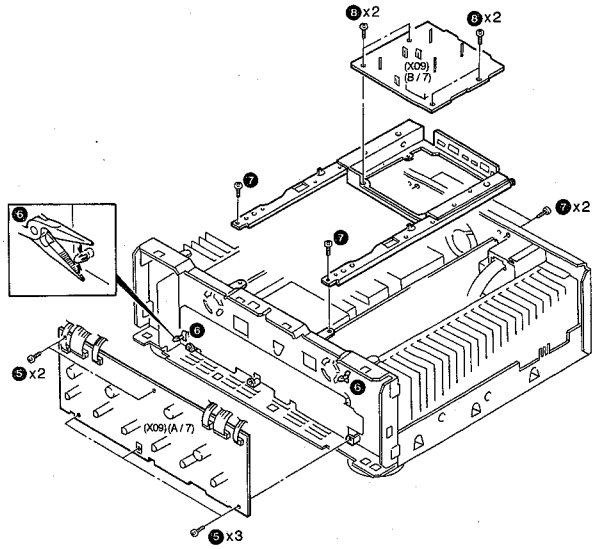
1) Removing the front panel and panel escutcheon

1. Remove the three screws (❶), then remove the small panel at the bottom.
2. Remove the 10 screws (❷), then remove the front panel.
3. Remove the seven hooks (❸), then remove the panel escutcheon.
4. Remove the four screws (❹), then remove the switch fitting.



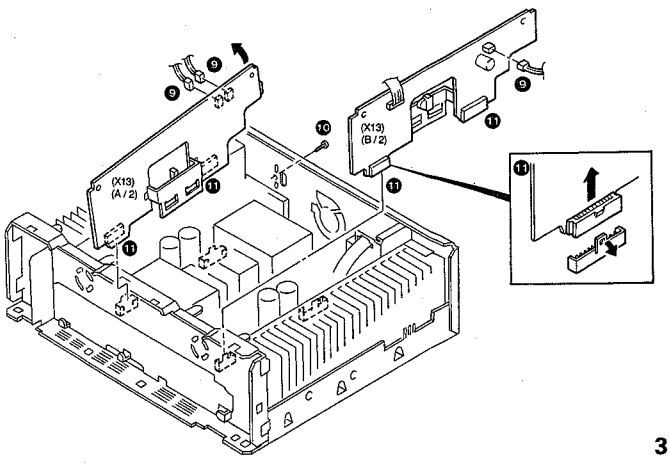
2) Removing X09, A/7 (A-class PCB) and X09, B/7

5. Remove the five screws (❺).
6. Remove the two unit holders (❻), then remove the PCB.
7. Remove the four screws (❼), then remove the frame.
8. Remove the four screws (❽), then remove the PCB.



3) Removing X13 (B-class PCB)

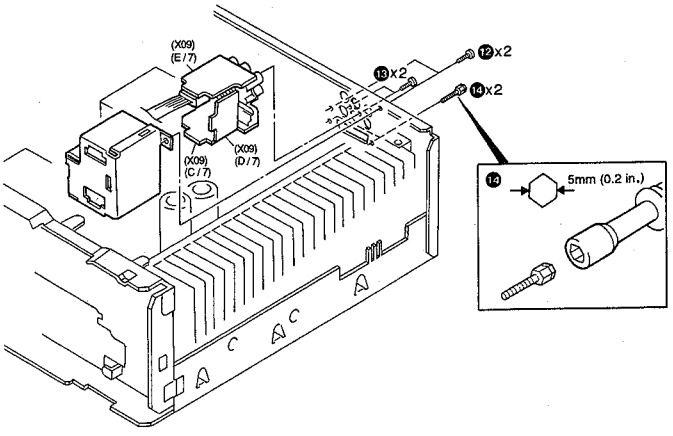
9. Disconnect the three connectors (❾).
10. Remove the one screw (❿).
11. Disconnect the four connectors (⓫), then remove the PCB.
    * Move the R-side PCB (X13, B/2) to the sub-chassis side, lift the terminal side, and remove the PCB to prevent damage to the DB25 terminal.
    * Note that the connector does not go in easily when the R-side PCB (X13, B/2) has been installed.



DISASSEMBLY FOR REPAIR

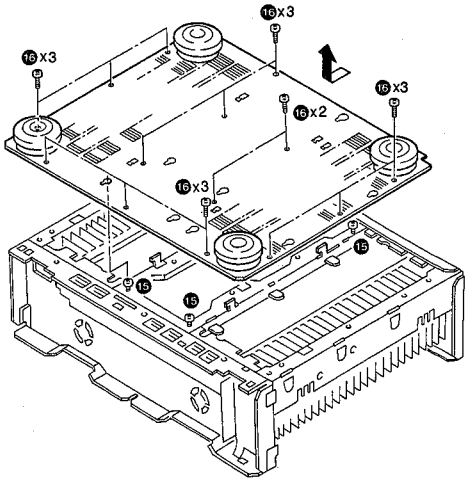
4) Removing the DB25 terminal

12. Remove the two screws (⑫), then remove the fitting.
13. Remove the two screws (⑬), then remove the two hexagonal-head volts (⑭) with the box screwdriver (5 mm [0.2 in.]), and remove the PCB.



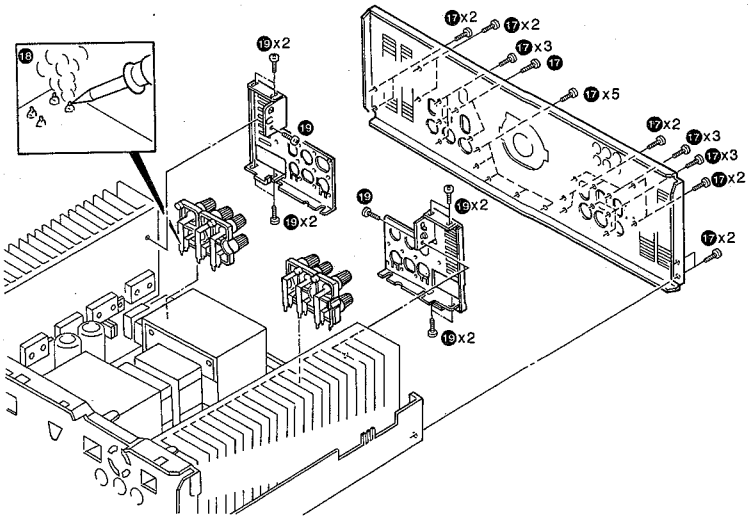
5) Removing the bottom plate

14. Loosen the three screws (⑮).
15. Remove the 14 screws (⑯), then slide the bottom plate slightly forward and remove it.



6) Removing the speaker terminals

16. Remove the 26 screws (⑰), then remove the rear panel.
17. Remove the solder from the speaker terminals(⑱), remove the 10 screws (⑲) holding the fitting, then remove the two speaker terminals.



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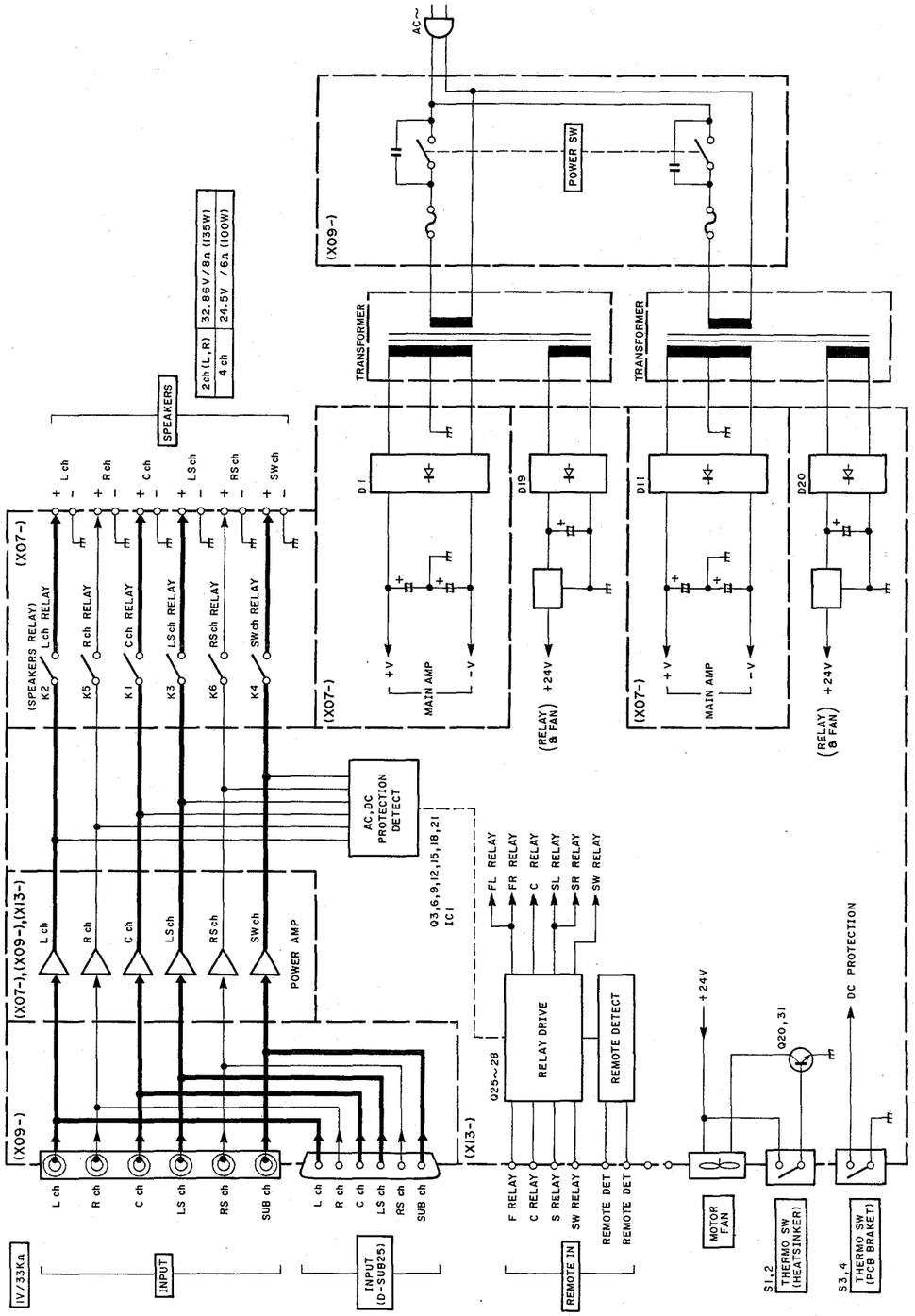
BLOCK DIAGRAM



ADJUSTMENT

No.	ITEM	INPUT SETTING	OUTPUT SETTING	PLAYER SETTING	ALIGNMENT POINT	ALIGN FOR	FIG
Unless you have some special reason otherwise, please use the following setting for each switch. POWER: ON SPEAKER: ON							
1	OFF-SET VOLTAGE	–	Connect a DC voltmeter to each channel of speaker terminal (+,–).	–	Lch : VR1 Rch : VR5 LSch : VR3 RSch : VR6 Cch : VR2 SWch : VR4 (X09-3800-10)	0V	
2	IDLE CURRENT	–	Connect a DC voltmeter between TP8 and TP10 (Lch) TP4 and TP6 (LSch) TP12 and TP14 (Cch). (X07-2750-10,A/2)	–	Lch : VR2 LSch : VR1 Cch : VR3 (X07-2750-10, A/2)	8mV	
			Connect a DC voltmeter between TP7 and TP9 (Rch) TP3 and TP5 (RSch) TP11 and TP13 (SWch). (X07-2750-10,B/2)	–	Rch : VR5 RSch : VR4 SWch : VR6 (X07-2750-10, B/2)		

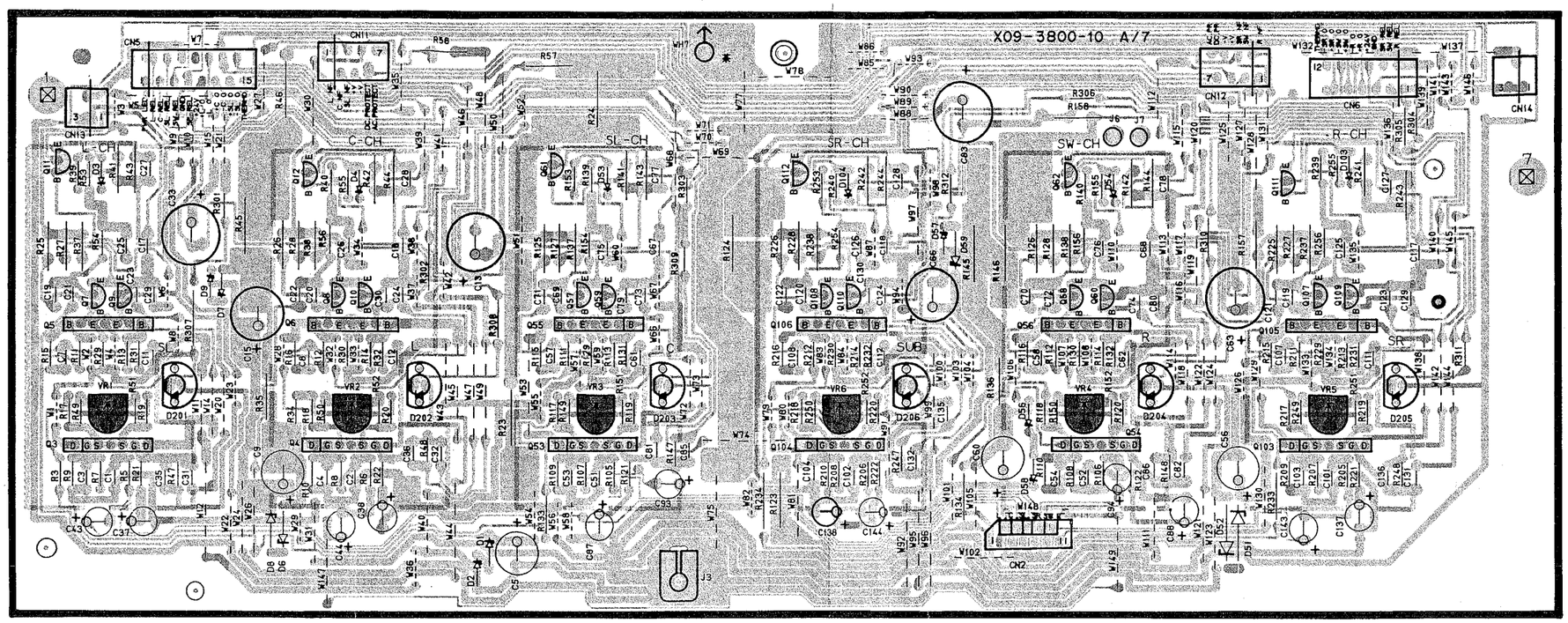
REGLAGE

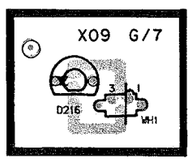
No.	ITEM	REGLAGE D' ENTREEE	REGLAGE DE SORTIE	REGLAGE DU LECTEUR	POINT D'ALIGNEMENT	ALIGNEMENT POUR	FIG
A moins que l'on n'ait d'autres raisons, utiliser le réglage suivant pour chaque commutateur. ALIMENTATION: ACTIVE HAUT-PARLEUR: ACTIVE							
1	TENSION DE SUPPRESSION	–	Connecter un voltmètre CC à chaque canal de borne de haut-parleur (+,–).	–	Lch : VR1 Rch : VR5 LSch : VR3 RSch : VR6 Cch : VR2 SWch : VR4 (X09-3800-10)	0V	
2	COURANT REACTIF	–	Connecter un voltmètre CC entre TP8 et TP10 (Lch) TP4 et TP6 (LSch) TP12 et TP14 (Cch). (X07-2750-10. A/2)	–	Lch : VR2 LSch : VR1 Cch : VR3 (X07-2750-10. A/2)	8mV	
			Connecter un voltmètre CC entre TP7 et TP9 (R ch) TP3 et TP5 (RSch) TP11 et TP13 (SWch). (X07-2750-10.B/2)	–	Rch : VR5 RSch : VR4 SWch : VR6 (X07-2750-10. B/2)		

ABGLEICH

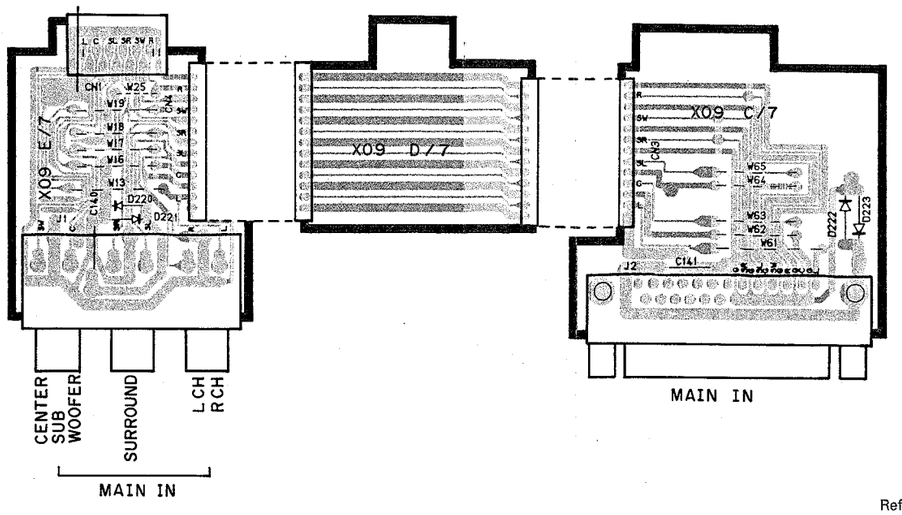
Nr.	GEGENSTAND	EINGABE EINSTELLUNG	AUSGABE EINSTELLUNG	PLAYER EINSTELLUNG	AUSRICHTUNGSPUNKT	AUSRICHTEN FÜR	ABB
Außer wenn Sie einen besonderen anderen Grund haben, verwenden Sie bitte die folgenden Einstellungen für jeden Schalter. STROMVERSORGUNG: EIN LAUTSPRECHER: EIN							
1	OFF-SET-SPANNUNG	–	Schließen Sie eine GS-Spannungsmesser an jedem Kanal der Lautsprecherbuchse an (+,–).	–	Lch : VR1 Rch : VR5 LSch : VR3 RSch : VR6 Cch : VR2 SWch : VR4 (X09-3800-10)	0V	
2	BLINDSTROM	–	Einen GS-Spannungsmesser zwischen TP8 und TP10 (Lch) TP4 und TP6 (LSch) TP12 und TP14 (Cch) anschließen. (X07-2750-10. A/2)	–	Lch : VR2 LSch : VR1 Cch : VR3 (X07-2750-10. A/2)	8mV	
			Einen GS-Spannungsmesser zwischen TP7 und TP9 (Rch) TP3 und TP5 (RSch) TP11 und TP13 (SWch) anschließen. (X07-2750-10. B/2)	–	Rch : VR5 RSch : VR4 SWch : VR6 (X07-2750-10. B/2)		

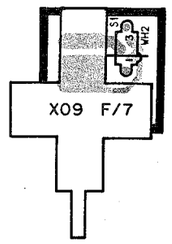
PC BOARD (Component side view)





POWER LED

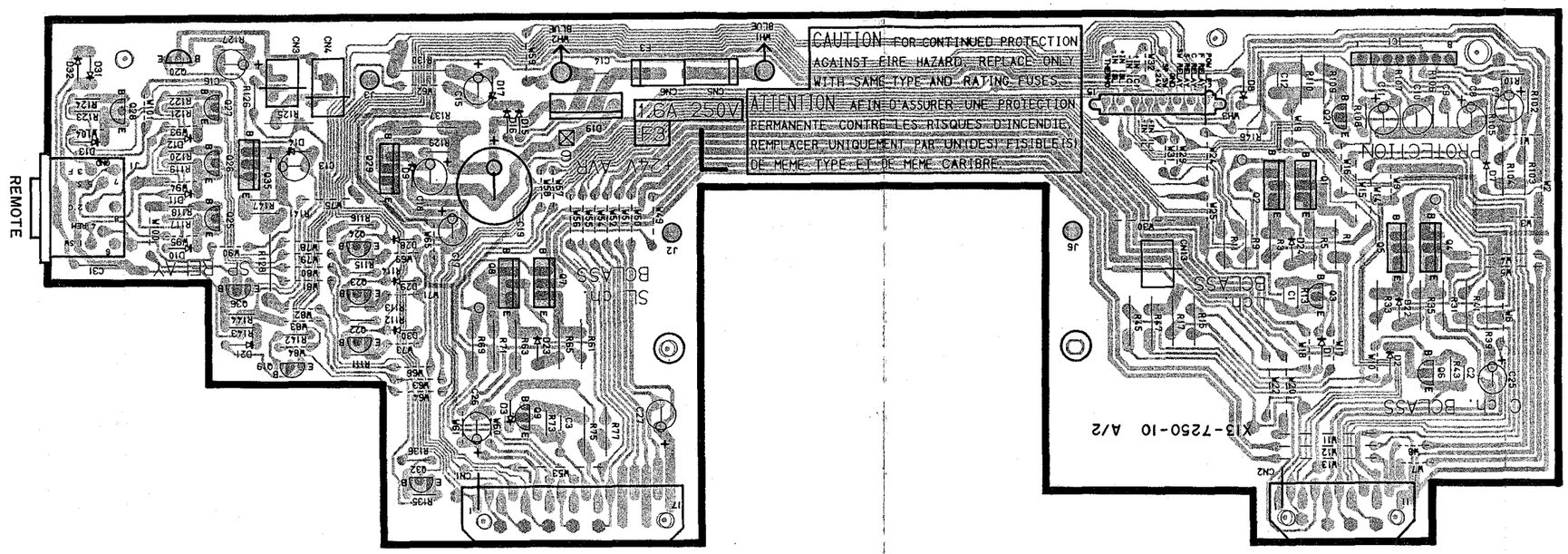


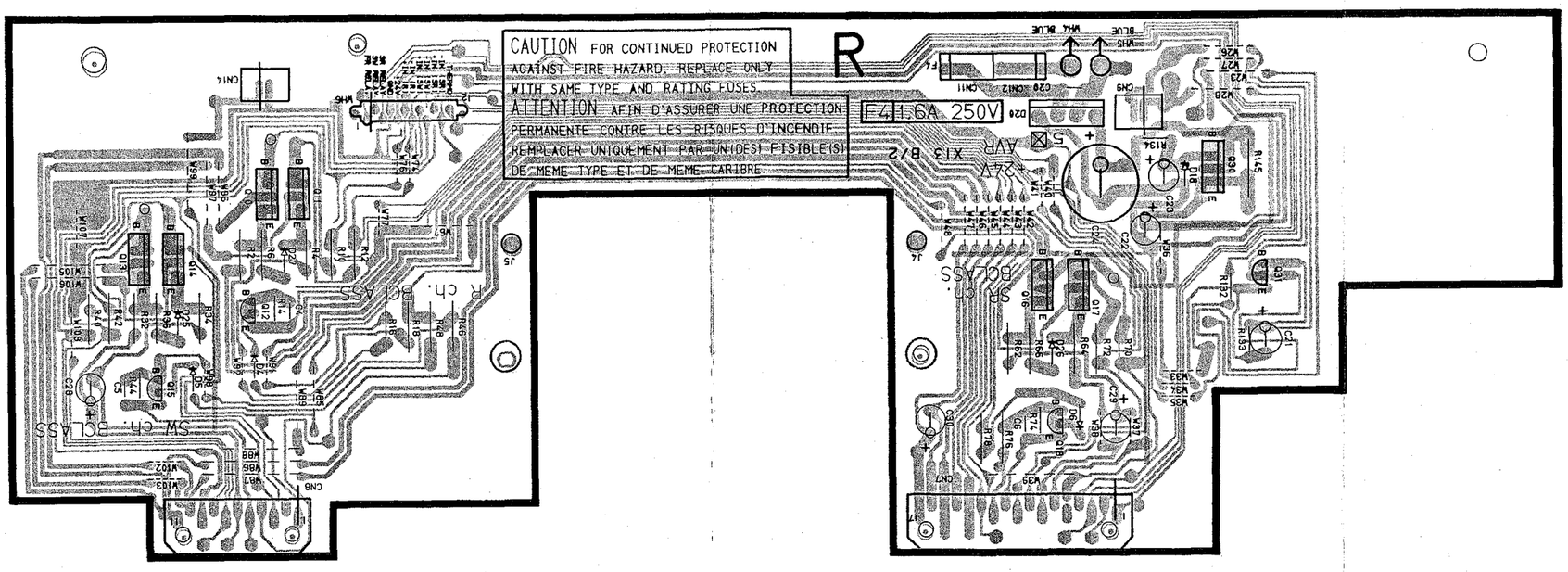


SPEAKER
ON↔OFF

Refer to the schematic diagram for the values of registers and capacitors.

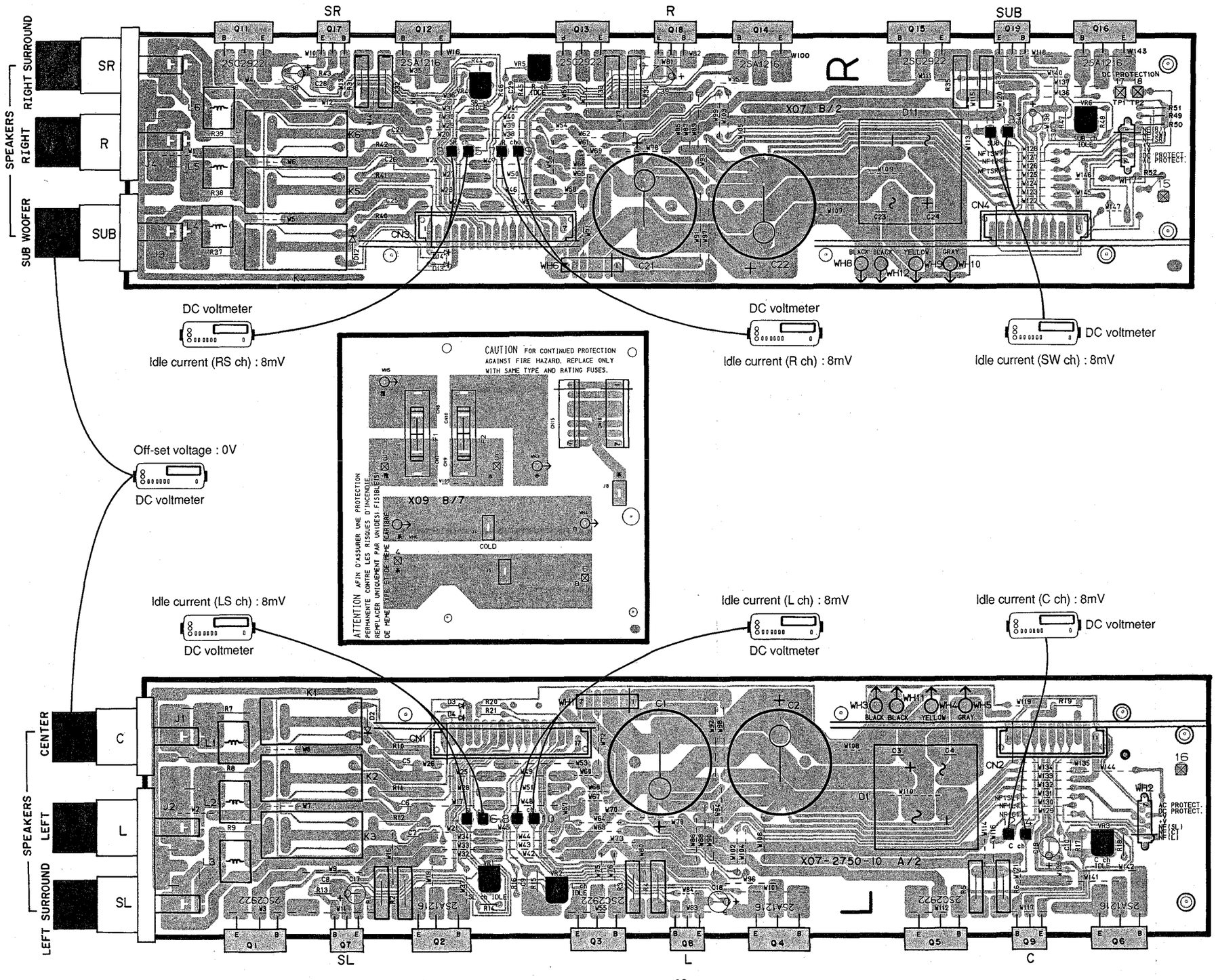
PC BOARD (Component side view)



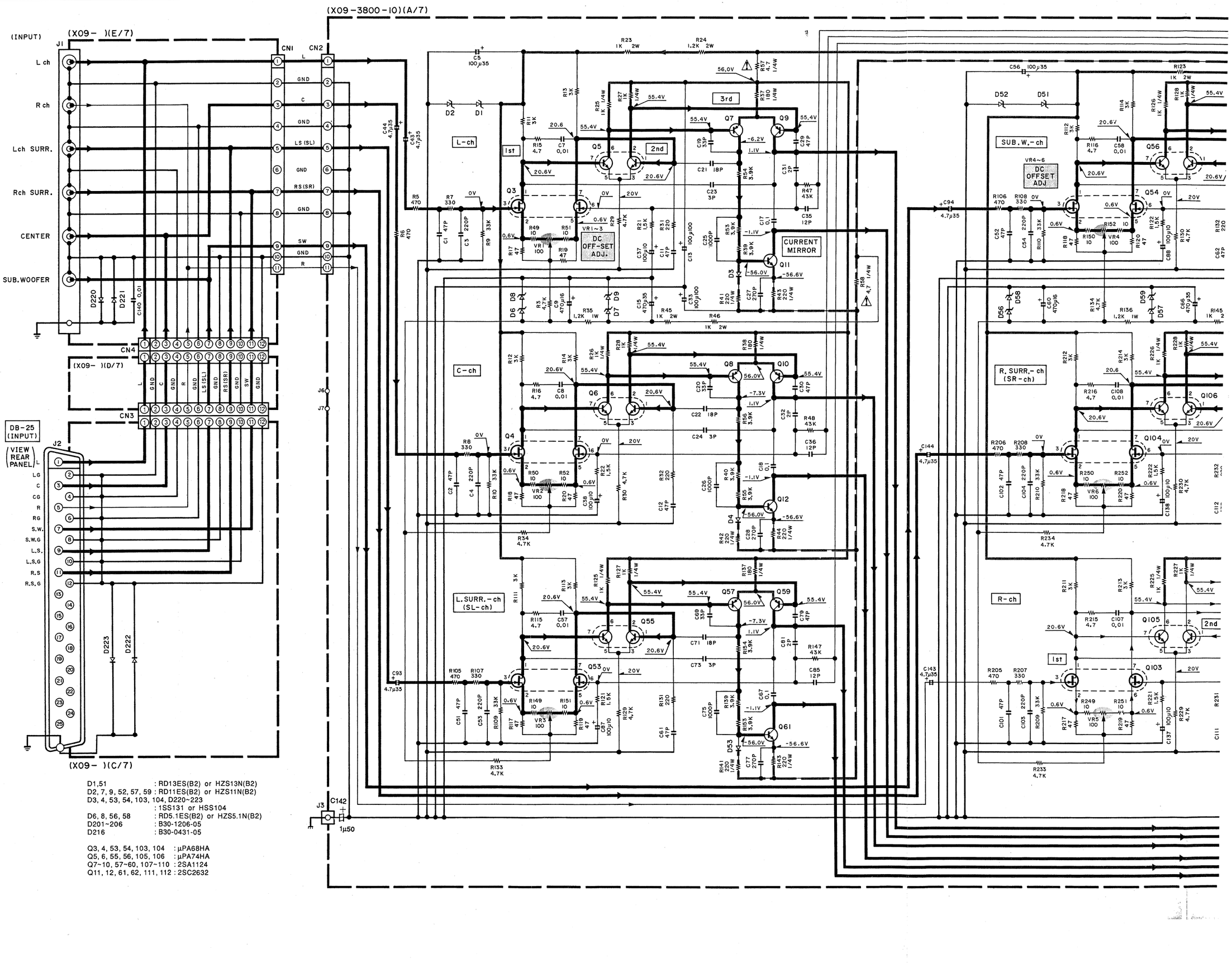

CAUTION FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD REPLACE ONLY
WITH SAME TYPE AND RATING FUSES.
ATTENTION AFIN D'ASSURER UNE PROTECTION
PERMANENTE CONTRE LES RISQUES D'INCENDIE,
REMPLACER UNIQUEMENT PAR UN(DES) FISIBLE(S)
DE MEME TYPE ET DE MEME CARIBRE.
F4 1.6A 250V
X13 B/2

Refer to the schematic diagram for the values of registers and capacitors.

PC BOARD (Component side view)

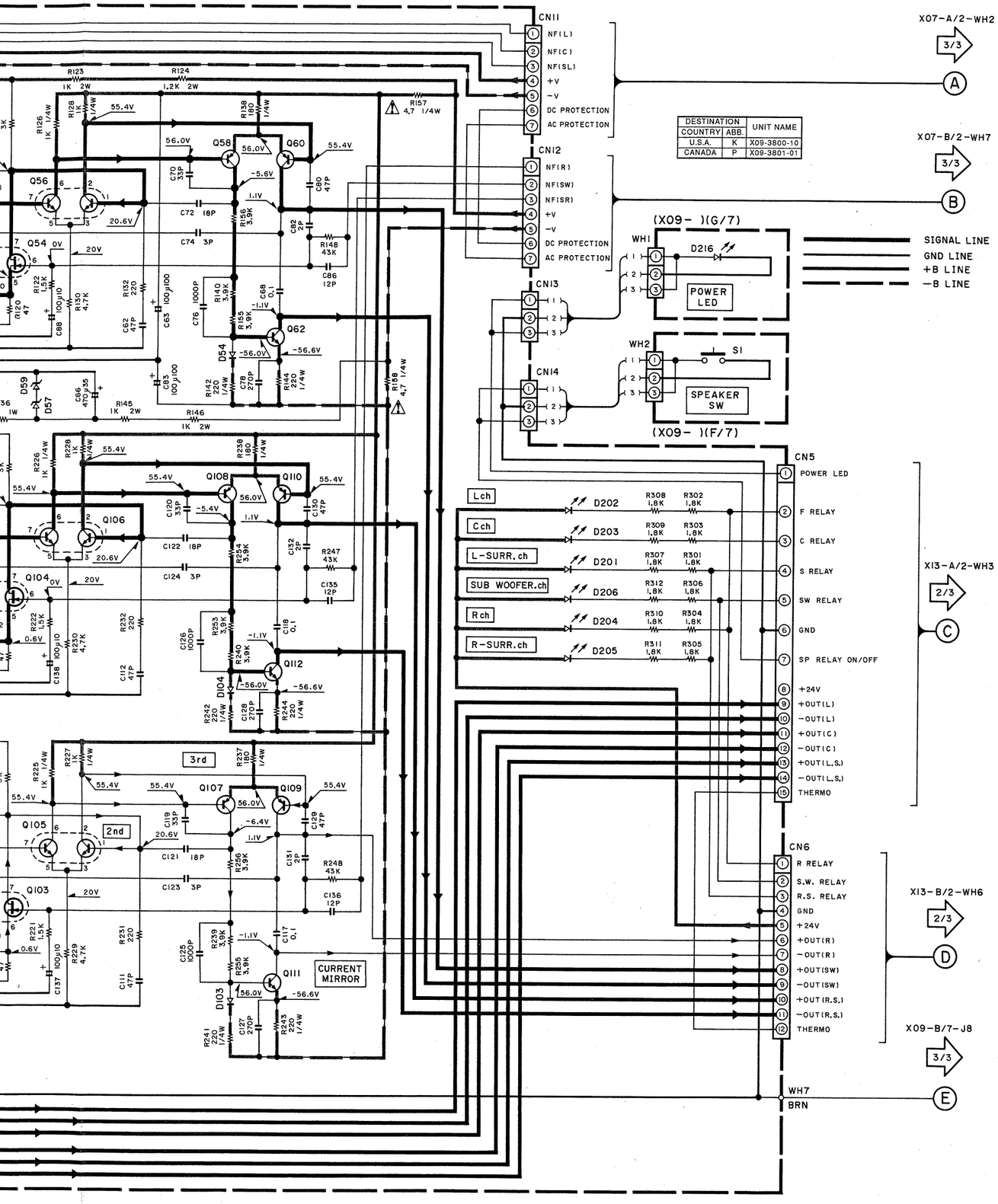


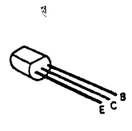
Refer to the schematic diagram for the values of registers and capacitors.

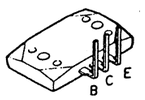


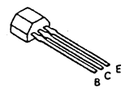
D1,51 : RD13ES(B2) or HZS13N(B2)
D2, 7, 9, 52, 57, 59 : RD11ES(B2) or HZS11N(B2)
D3, 4, 53, 54, 103, 104, D220~223 : 1SS131 or HSS104
D6, 8, 56, 58 : RD5.1ES(B2) or HZS5.1N(B2)
D201~206 : B30-1206-05
D216 : B30-0431-05

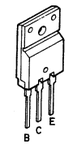
Q3, 4, 53, 54, 103, 104 : μPA68HA
Q5, 6, 55, 56, 105, 106 : μPA74HA
Q7~10, 57~60, 107~110 : 2SA1124
Q11, 12, 61, 62, 111, 112 : 2SC2632

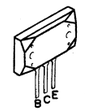


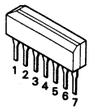

2SA1124
2SA992
2SC1845
2SC2632
2SC3244

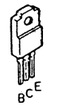

2SC2922LB

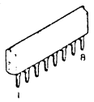

2SA1048
2SC2458

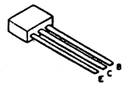

2SD2012


2SA1216LB


UPA68HA
UPA74HA


2SA1535A
2SC3944A
2SD2061


UPC1237HA


2SA1309A
2SC3311A

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DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units

Les tensions c.c. doivent ètre mesurées avec un voltmètre à haute impédance sans signal d'entrèe. Les valeurs peuvent différer légèrement du fait des variations. inhérentes aux appareils et aux instrument de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanden die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

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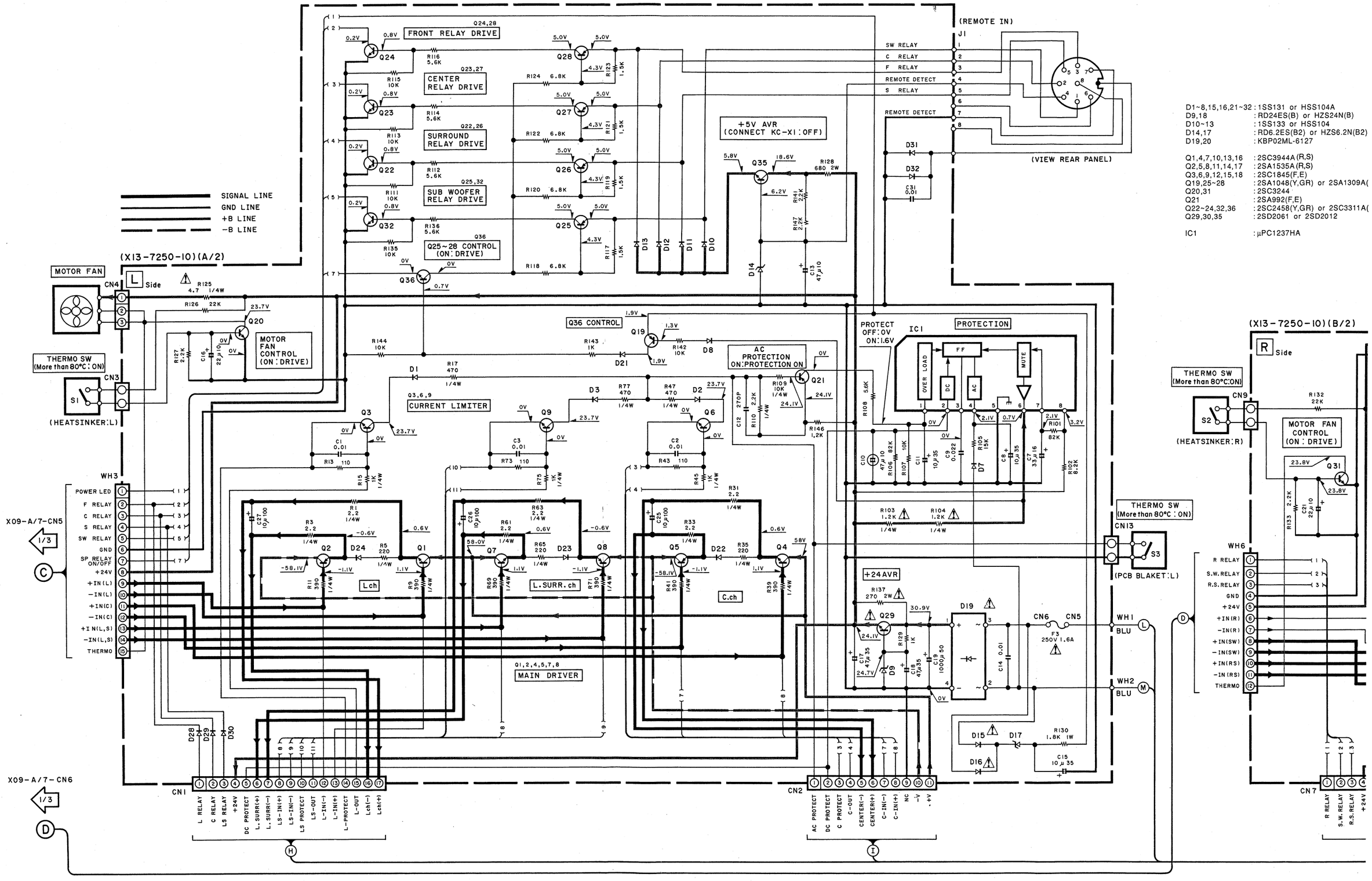
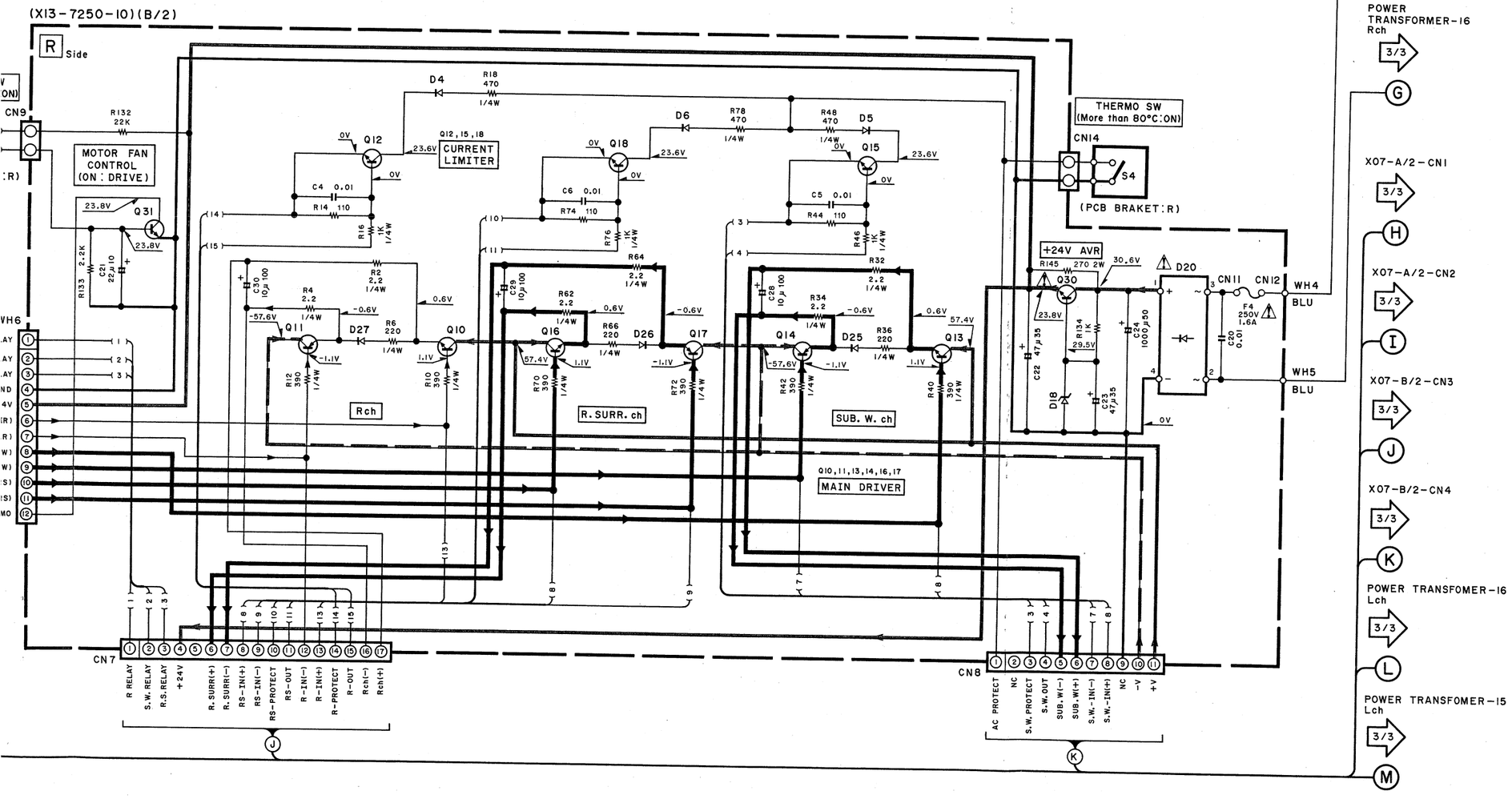


D1~8,15,16,21~32	: 1SS131 or HSS104A
D9,18	: RD24ES(B) or HZS24N(B)
D10~13	: 1SS133 or HSS104
D14,17	: RD6.2ES(B2) or HZS6.2N(B2)
D19,20	: KBP02ML-6127
Q1,4,7,10,13,16	: 2SC3944A(R,S)
Q2,5,8,11,14,17	: 2SA1535A(R,S)
Q3,6,9,12,15,18	: 2SC1845(F,E)
Q19,25~28	: 2SA1048(Y,GR) or 2SA1309A(
Q20,31	: 2SC3244
Q21	: 2SA992(F,E)
Q22~24,32,36	: 2SC2458(Y,GR) or 2SC3311A(
Q29,30,35	: 2SD2061 or 2SD2012
IC1	: μPC1237HA

,21~32 : 1SS131 or HSS104A
: RD24ES(B) or HZS24N(B)
: 1SS133 or HSS104
: RD6.2ES(B2) or HZS6.2N(B2)
: KBP02ML-6127

3,16 : 2SC3944A(R,S)
4,17 : 2SA1535A(R,S)
5,18 : 2SC1845(F,E)
: 2SA1048(Y,GR) or 2SA1309A(Q,R)
: 2SC3244
: 2SA992(F,E)
36 : 2SC2458(Y,GR) or 2SC3311A(Q,R)
: 2SD2061 or 2SD2012

: μPC1237HA



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Y08-4770-10

KM-X1

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D1,11 : D5FB20#1
D2~4,12~14 : HSS104 or 1SS133

Q1,3,5,11,13,15 : 2SC2922LB(P,G)
Q2,4,6,12,14,16 : 2SA1216LB(P,G)
Q7~9,17~19 : 2SC4137F19 (V,W)

X09-A/7-CN12 1/3 → B
X13-B/2-CN7 2/3 → J
X13-B/2-CN8 2/3 → K
X13-A/2-CN1 2/3 → H
X13-B/2-WH4 2/3 → F
X13-B/2-WH5 2/3 → G
X09-A/7-CN11 1/3 → A
X13-A/2-WH1 2/3 → L
X13-A/2-WH2 2/3 → M
X13-A/2-CN2 2/3 → I
X09-A/7-WH7 1/3 → E

(X07-2750-10)(A/2)

L Side

Lch RELAY
D4 K2 CENTER RELAY
D2 K1 L.S. RELAY
D3 K3

Q1~6 FINAL

L.SURR. SP. RELAY K3 R9 4.7 1W L3 → J2 → LEFT SURROUND SP.
Lch SP. RELAY K2 R8 4.7 1W L2 → Lch SP.
CENTER SP. RELAY K1 R7 4.7 1W L1 → J1 → CENTER SP.

CN1
L RELAY 1
C RELAY 2
LS RELAY 3
+24V 4
DC PROTECT 5
L.SURR(+) 6
L.SURR(−) 7
LS-IN(+) 8
LS-IN(−) 9
L.S. PROTECT 10
LS-OUT 11
L-IN(−) 12
L-IN(+) 13
L-PROTECT 14
L-OUT 15
Lch(−) 16
Lch(+) 17

L.S. IDLE-L.S. C8 0.01 R13 9.1K VR1 1K R14 2.7K Q7 C17 47μ10
IDLE-L C9 0.01 R16 2.7K VR2 1K R15 9.1K Q8 C18 47μ10
IDLE-C C10 0.01 R18 2.7K VR3 1K R17 9.1K Q9 C19 47μ10

LS(SL)ch IDLE
Lch IDLE
Cch IDLE

WH2
NF(L) 1
NF(C) 2
NF(SL) 3
+V 4
−V 5
DC PROTECTION 6
AC PROTECTION 7

CN2
AC PROTECT 1
DC PROTECT 2
C-PROTECT 3
C-OUT 4
CENTER(−) 5
CENTER(+) 6
C-IN(−) 7
C-IN(+) 8
NC 9
−V 10
+V 11

Q1 R1 0.22 5W
Q2 R2 0.22 5W
Q3 R3 0.22 5W
Q4 R4 0.22 5W
Q5 R5 0.22 5W
Q6 R6 0.22 5W
R19 390K R20 390K R21 390K
R12 10 2W C7 0.1
R11 10 2W C6 0.1
R10 10 2W C5 0.1

WH1
GND 7
GND 6
GND 5
GND 4
GND 3
+V 2
−V 1

D1
C1 10000μ71
C2 10000μ71
C3 0.01μ100
C4 0.01μ100

WH4 YEL 4
WH3 BLK 3
WH11 BLK 11
WH5 GRY 5

(X07-2750-10)(B/2)

TP1 17 TP2 18

Rch RELAY
D14 K5 SUB.W. RELAY
D12 K4 Rch RELAY
D13 K6

Q11~16 FINAL

R53 10K R52 270K R51 56K
Q11 R31 0.22 5W
Q12 R32 0.22 5W
Q13 R33 0.22 5W
Q14 R34 0.22 5W
Q15 R35 0.22 5W
Q16 R36 0.22 5W
R42 10 2W C27 0.1

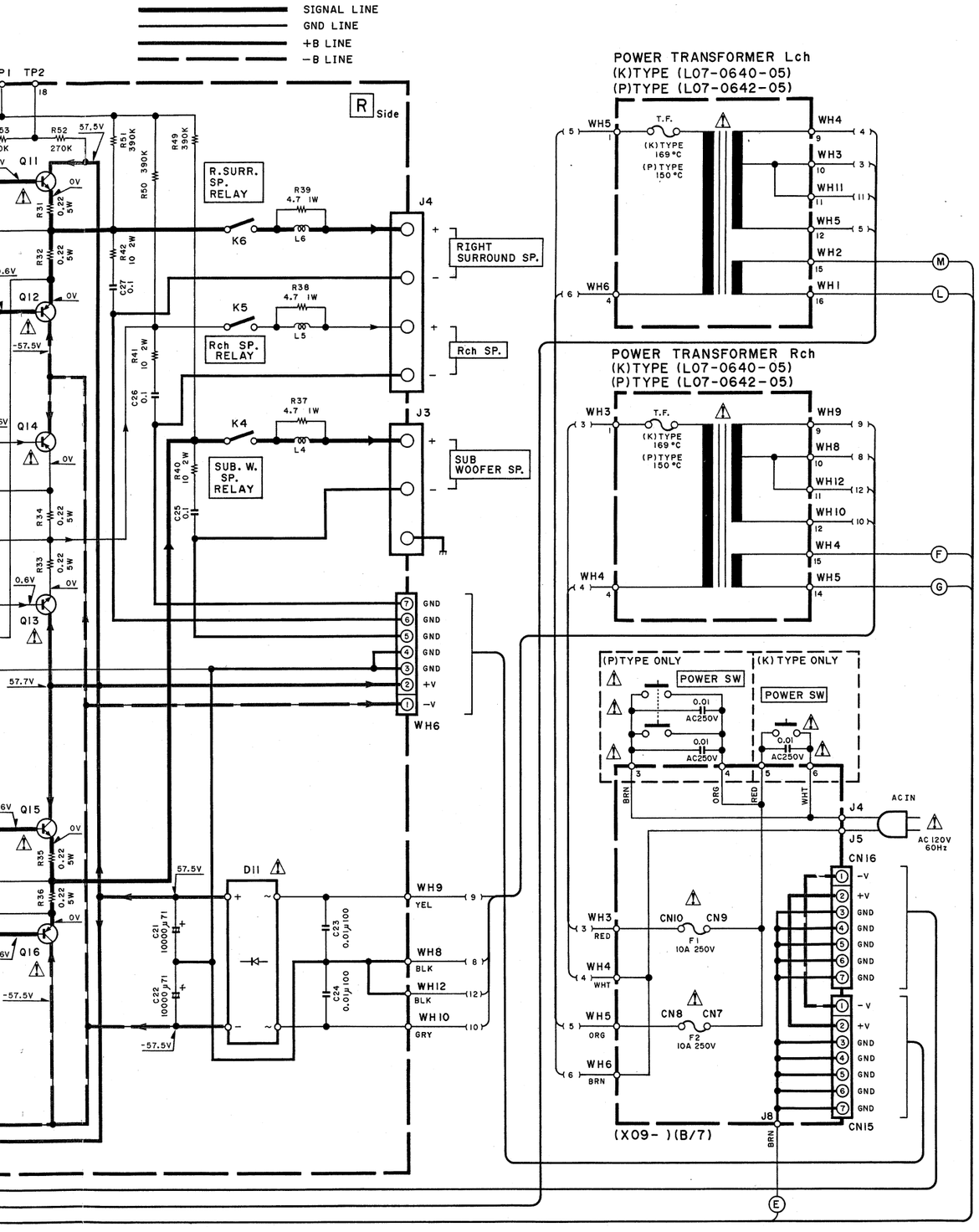
CN3
R.S. RELAY 1
S.W. RELAY 2
R RELAY 3
+24V 4
NC 5
R.SURR(+) 6
R.SURR(−) 7
RS-IN(+) 8
RS-IN(−) 9
RS-PROTECT 10
RS-OUT 11
R-IN(−) 12
R-IN(+) 13
R-PROTECT 14
R-OUT 15
Rch(−) 16
Rch(+) 17

R.S. IDLE-R.S. C28 0.01 R43 9.1K VR4 1K R44 2.7K Q17 C38 47μ10
IDLE-R C29 0.01 R45 9.1K VR5 1K R46 2.7K Q18 C39 47μ10
IDLE-SUB C30 0.01 R47 9.1K VR6 1K R48 2.7K Q19 C40 47μ10

RS(SR)ch IDLE
Rch IDLE
SUB.Wch IDLE

WH7
NF(R) 1
NF(SW) 2
NF(SR) 3
+V 4
−V 5
DC PROTECTION 6
AC PROTECTION 7

CN4
AC PROTECT 1
NC 2
S.W. PROTECT 3
S.W. OUT 4
SUB.W(−) 5
SUB.W(+) 6
S.W.-IN(−) 7
S.W.-IN(+) 8
NC 9
−V 10
+V 11



CAUTION: For continued safety, replace safety critical components only with manufacture's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out. (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations. inhérentes aux appareils et aux instrument de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanden die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Gerâten u.U. geringfûgig.

Y08-4770-10

KM-X1

KENWOOD

× New Parts
Parts without Parts No. are not supplied.
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Teile ohne Parts No. werden nicht geliefert.

No. 1

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
KM-X1						
601	1B	*	A01-3004-01	METALLIC CABINET		
602	3A	*	A29-0328-12	PANEL		
603	3A	*	A60-0342-22	PANEL ASSY		
604	3B	*	B01-0497-12	PANEL ESCUTCHEON ASSY		
605	3B	*	B12-0215-04	INDICATOR		
606	3A		B12-0219-04	INDICATOR		
607	3A		B43-0287-04	KENWOOD BADGE		
-			B46-0092-23	WARRANTY CARD	K	
-			B46-0121-23	WARRANTY CARD	P	
-			B46-0197-00	QUESTIONAIRE CARD	K	
-		*	B60-1089-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B60-1090-00	INSTRUCTION MANUAL(FRENCH)	P	
⚠ -			C91-1439-05	FILM 0.01UF 250VAC		
⚠ 611	1D		E30-0978-05	AC POWER CORD		
612	1D	*	E35-0551-05	FLAT CABLE		
FANM	1D		F09-0081-05	FAN		
615	3A		G11-0191-04	SOFT TAPE (90X5X2.5)		
-		*	H10-5432-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5433-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0319-04	PROTECTION BAG (850X450X0.03)		
-		*	H50-0530-04	ITEM CARTON CASE		
620	3B.3C		J02-1002-05	FOOT		
621	2B		J19-3324-15	UNIT HOLDER		
⚠ 625	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
626	2A,3B	*	K29-5642-14	KNOB(POWER,SPEAKER)		
⚠ 627	1B,1C	*	L07-0640-05	POWER TRANSFORMER	K	
⚠ 627	1B,1C	*	L07-0642-05	POWER TRANSFORMER	P	
A			N09-2907-05	SEMS (TAPTITE SCREW)(3X14)		
B			N09-0333-05	TAPPING SCREW (3X12)		
C			N09-1445-05	SET SCREW (M3X8)		
D		*	N09-2979-05	HEXAGON HEAD BOLT		
E			N35-3006-45	BINDING HEAD MACHINE SCREW		
F			N89-3008-45	BINDING HEAD TAPTITE SCREW		
G			N89-3008-46	BINDING HEAD TAPTITE SCREW		
H			N89-4008-45	BINDING HEAD TAPTITE SCREW		
J			N89-3023-45	BINDING HEAD TAPTITE SCREW		
⚠ 630	2B		S40-1094-05	PUSH SWITCH (POWER TYPE)	K	
⚠ 630	2B	*	S68-0029-05	PUSH SWITCH (POWER TYPE)	P	
POWER AMPLIFIER UNIT (X07-2750-10)						
C1 ,2		*	C90-3478-05	ELECTRO 10000UF 71WV		
C3 ,4			CQ93HP2A103J	MYLAR 0.010UF J		
C5 -7			CF92FV1H104J	MF 0.10UF J		
C8 -10			CK45FF1H103Z	CERAMIC 0.010UF Z		
C17 -19		*	C90-3362-05	ELECTRO 47UF 10WV		
C21 ,22		*	C90-3478-05	ELECTRO 10000UF 71WV		

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

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No. 2

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C23 ,24			CQ93HP2A103J	MYLAR 0.010UF J		
C25 -27			CF92FV1H104J	MF 0.10UF J		
C28 -30			CK45FF1H103Z	CERAMIC 0.010UF Z		
C38 -40		*	C90-3362-05	ELECTRO 47UF 10WV		
J1	1B	*	E70-0030-05	SCREW TERMINAL BOARD(C.SP)		
J2	1B		E70-0003-05	SCREW TERMINAL BOARD(L,LS SP.)		
J3	2D	*	E70-0030-05	SCREW TERMINAL BOARD(SW SP.)		
J4	2D		E70-0003-05	SCREW TERMINAL BOARD(R,RS SP.)		
L1 -6			L39-0085-05	PHASE COMPENSATION COIL		
R1 -6			R92-0167-05	METAL-PLATE 0.22 K 5W		
R7 -9			RS14DB3A4R7J	FL-PROOF RS 4.7 J 1W		
R10 -12			RS14DB3D100J	FL-PROOF RS 10 J 2W		
R31 -36			R92-0167-05	METAL-PLATE 0.22 K 5W		
R37 -39			RS14DB3A4R7J	FL-PROOF RS 4.7 J 1W		
R40 -42			RS14DB3D100J	FL-PROOF RS 10 J 2W		
VR1 -6			R12-1616-05	TRIMMING POT 1K<IDLE CURRENT>		
K1 -6			S51-2078-05	MAGNETIC RELAY(SPEAKER ON/OFF)		
⚠ D1			D5FB20*1	DIODE		
D2 -4			HSS104	DIODE		
D2 -4			1SS133	DIODE		
⚠ D11			D5FB20*1	DIODE		
D12 -14			HSS104	DIODE		
D12 -14			1SS133	DIODE		
⚠ Q1		*	2SC2922LB(P,G)	TRANSISTOR		
⚠ Q2		*	2SA1216LB(P,G)	TRANSISTOR		
⚠ Q3		*	2SC2922LB(P,G)	TRANSISTOR		
⚠ Q4		*	2SA1216LB(P,G)	TRANSISTOR		
⚠ Q5		*	2SC2922LB(P,G)	TRANSISTOR		
⚠ Q6		*	2SA1216LB(P,G)	TRANSISTOR		
Q7 -9			2SC4137F19(V,W)	TRANSISTOR		
⚠ Q11		*	2SC2922LB(P,G)	TRANSISTOR		
⚠ Q12		*	2SA1216LB(P,G)	TRANSISTOR		
⚠ Q13		*	2SC2922LB(P,G)	TRANSISTOR		
⚠ Q14		*	2SA1216LB(P,G)	TRANSISTOR		
⚠ Q15		*	2SC2922LB(P,G)	TRANSISTOR		
⚠ Q16		*	2SA1216LB(P,G)	TRANSISTOR		
⚠ Q17 -19			2SC4137F19(V,W)	TRANSISTOR		
AUDIO UNIT (X09-3800-10)						
D201-206			B30-1206-05	LED		
D216			B30-0431-05	LED(LN21CPH)(POWER LED)		
C1 ,2			CC45FSL1H470J	CERAMIC 47PF J		
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J		
C5		*	C90-3397-05	ELECTRO 100UF 35WV		
C7 ,8			CF92FV1H103J	MF 0.010UF J		
C9		*	C90-3377-05	ELECTRO 470UF 16WV		
C11 ,12			CC45FSL1H470J	CERAMIC 47PF J		
C13		*	C90-3444-05	ELECTRO 100UF 100WV		
C15		*	C90-3400-05	ELECTRO 470UF 35WV		
C17 ,18			CF92FV1H104J	MF 0.10UF J		
C19 ,20			CC45FSL1H330J	CERAMIC 33PF J		
C21 ,22			CC45FSL1H180J	CERAMIC 18PF J		
C23 ,24			CC45FSL1H030C	CERAMIC 3.0PF C		

L:Scandinavia K:USA P:Canada
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No. 3

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C25 ,26			CK45FB1H102K	CERAMIC 1000PF K		
C27 ,28			CC45FSL1H271J	CERAMIC 270PF J		
C29 ,30			CC45FSL1H470J	CERAMIC 47PF J		
C31 ,32			CC45FSL1H020C	CERAMIC 2.0PF C		
C33		*	C90-3444-05	ELECTRO 100UF 100WV		
C35 ,36			CC45FSL1H120J	CERAMIC 12PF J		
C37 ,38			CE04KW1A101M	ELECTRO 100UF 10WV		
C43 ,44			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C51 ,52			CC45FSL1H470J	CERAMIC 47PF J		
C53 ,54			CC45FSL1H221J	CERAMIC 220PF J		
C56		*	C90-3397-05	ELECTRO 100UF 35WV		
C57 ,58			CF92FV1H103J	MF 0.010UF J		
C60		*	C90-3377-05	ELECTRO 470UF 16WV		
C61 ,62			CC45FSL1H470J	CERAMIC 47PF J		
C63		*	C90-3444-05	ELECTRO 100UF 100WV		
C66		*	C90-3400-05	ELECTRO 470UF 35WV		
C67 ,68			CF92FV1H104J	MF 0.10UF J		
C69 ,70			CC45FSL1H330J	CERAMIC 33PF J		
C71 ,72			CC45FSL1H180J	CERAMIC 18PF J		
C73 ,74			CC45FSL1H030C	CERAMIC 3.0PF C		
C75 ,76			CK45FB1H102K	CERAMIC 1000PF K		
C77 ,78			CC45FSL1H271J	CERAMIC 270PF J		
C79 ,80			CC45FSL1H470J	CERAMIC 47PF J		
C81 ,82			CC45FSL1H020C	CERAMIC 2.0PF C		
C83		*	C90-3444-05	ELECTRO 100UF 100WV		
C85 ,86			CC45FSL1H120J	CERAMIC 12PF J		
C87 ,88			CE04KW1A101M	ELECTRO 100UF 10WV		
C93 ,94			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C101,102			CC45FSL1H470J	CERAMIC 47PF J		
C103,104			CC45FSL1H221J	CERAMIC 220PF J		
C107,108			CF92FV1H103J	MF 0.010UF J		
C111,112			CC45FSL1H470J	CERAMIC 47PF J		
C117,118			CF92FV1H104J	MF 0.10UF J		
C119,120			CC45FSL1H330J	CERAMIC 33PF J		
C121,122			CC45FSL1H180J	CERAMIC 18PF J		
C123,124			CC45FSL1H030C	CERAMIC 3.0PF C		
C125,126			CK45FB1H102K	CERAMIC 1000PF K		
C127,128			CC45FSL1H271J	CERAMIC 270PF J		
C129,130			CC45FSL1H470J	CERAMIC 47PF J		
C131,132			CC45FSL1H020C	CERAMIC 2.0PF C		
C135,136			CC45FSL1H120J	CERAMIC 12PF J		
C137,138			CE04KW1A101M	ELECTRO 100UF 10WV		
C140			C91-0769-05	CERAMIC 0.01UF K		
C142			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C143,144			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
J1	1D	*	E63-0074-05	PHONO JACK(MAIN IN)		
J2	1D	*	E58-0003-05	RECTANGULAR RECEPTACLE(MAIN IN		
⚠ F1 ,2		*	F05-1037-05	FUSE (250V 10A)		
CN7 -10			J13-0041-05	FUSE CLIP		
J6 .			J11-0098-05	WIRE CLAMPER		
R23			RS14DB3D102J	FL-PROOF RS 1.0K J 2W		
R24			RS14DB3D122J	FL-PROOF RS 1.2K J 2W		
R25 -28			RD14NB2E102J	RD 1.0K J 1/4W		

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No. 4

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
R35			RS14DB3A122J	FL-PROOF RS 1.2K J 1W		
R37 ,38			RD14NB2E181J	RD 180 J 1/4W		
R41 -44			RD14NB2E221J	RD 220 J 1/4W		
R45 ,46			RS14DB3D102J	FL-PROOF RS 1.0K J 2W		
⚠ R57 ,58			RD14NB2E4R7J	RD 4.7 J 1/4W		
R123			RS14DB3D102J	FL-PROOF RS 1.0K J 2W		
R124			RS14DB3D122J	FL-PROOF RS 1.2K J 2W		
R125-128			RD14NB2E102J	RD 1.0K J 1/4W		
R136			RS14DB3A122J	FL-PROOF RS 1.2K J 1W		
R137,138			RD14NB2E181J	RD 180 J 1/4W		
R141-144			RD14NB2E221J	RD 220 J 1/4W		
R145,146			RS14DB3D102J	FL-PROOF RS 1.0K J 2W		
⚠ R157,158			RD14NB2E4R7J	RD 4.7 J 1/4W		
R225-228			RD14NB2E102J	RD 1.0K J 1/4W		
R237,238			RD14NB2E181J	RD 180 J 1/4W		
R241-244			RD14NB2E221J	RD 220 J 1/4W		
VR1 -6		*	R12-5085-05	TRIMMING POT.(DC OFF-SET)		
S1	3B	*	S68-0030-05	PUSH SWITCH(SPEAKER SW)		
D1			HZS13N(B2)	ZENER DIODE		
D1			RD13ES(B2)	ZENER DIODE		
D2			HZS11N(B2)	ZENER DIODE		
D2			RD11ES(B2)	ZENER DIODE		
D3 ,4			HSS104	DIODE		
D3 ,4			1SS133	DIODE		
D6			HZS5.1N(B2)	ZENER DIODE		
D6			RD5.1ES(B2)	ZENER DIODE		
D7			HZS11N(B2)	ZENER DIODE		
D7			RD11ES(B2)	ZENER DIODE		
D8			HZS5.1N(B2)	ZENER DIODE		
D8			RD5.1ES(B2)	ZENER DIODE		
D9			HZS11N(B2)	ZENER DIODE		
D9			RD11ES(B2)	ZENER DIODE		
D51			HZS13N(B2)	ZENER DIODE		
D51			RD13ES(B2)	ZENER DIODE		
D52			HZS11N(B2)	ZENER DIODE		
D52			RD11ES(B2)	ZENER DIODE		
D53 ,54			HSS104	DIODE		
D53 ,54			1SS133	DIODE		
D56			HZS5.1N(B2)	ZENER DIODE		
D56			RD5.1ES(B2)	ZENER DIODE		
D57			HZS11N(B2)	ZENER DIODE		
D57			RD11ES(B2)	ZENER DIODE		
D58			HZS5.1N(B2)	ZENER DIODE		
D58			RD5.1ES(B2)	ZENER DIODE		
D59			HZS11N(B2)	ZENER DIODE		
D59			RD11ES(B2)	ZENER DIODE		
D103,104			HSS104	DIODE		
D103,104			1SS133	DIODE		
D220-223			HSS104	DIODE		
D220-223			1SS133	DIODE		
Q3 ,4			UPA68HA	DUAL FET		
Q5 ,6		*	UPA74HA	DUAL TRANSISTOR		
Q7 -10			2SA1124	TRANSISTOR		

KM-X1 KM-X1

EXPLODED VIEW

Ⓐ		:	N09-2907-05
Ⓑ		:	N09-0333-05
Ⓒ	φ3x6 (BLK)	:	N09-1445-05
Ⓓ		:	N09-2979-05
E	φ3x6 (BLK)	:	N35-3006-45
F	φ3x8 (BLK)	:	N89-3008-45
G	φ3x8	:	N89-3008-46
H	φ4x8 (BLK)	:	N89-4008-45
J	φ3x23 (BLK)	:	N89-3023-45

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Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考

No. 2

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考

No. 1

Parts with the exploded numbers larger than 700 are not supplied.

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No. 5

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
Q11 ,12			2SC2632	TRANSISTOR		
Q53 ,54			UPA68HA	DUAL FET		
Q55 ,56			UPA74HA	DUAL TRANSISTOR		
Q57 -60			2SA1124	TRANSISTOR		
Q61 ,62			2SC2632	TRANSISTOR		
Q103,104			UPA68HA	DUAL FET		
Q105,106		*	UPA74HA	DUAL TRANSISTOR		
Q107-110			2SA1124	TRANSISTOR		
Q111,112			2SC2632	TRANSISTOR		
SUB-CIRCUIT UNIT (X13-7250-10)						
C1 -6			CK45FF1H103Z	CERAMIC 0.010UF Z		
C7			CE04KW1C330M	ELECTRO 33UF 16WV		
C8			CE04KW1V100M	ELECTRO 10UF 35WV		
C9			CK45FF1H223Z	CERAMIC 0.022UF Z		
C10			CE04HW1A470M	NP-ELEC 47UF 10WV		
C11			CE04KW1V220M	ELECTRO 10UF 35WV		
C12			CC45FSL1H271J	CERAMIC 270PF J		
C13		*	C90-3362-05	ELECTRO 47UF 10WV		
C14			CK45FF1H103Z	CERAMIC 0.010UF Z		
C15		*	C90-3393-05	ELECTRO 10UF 35WV		
C16			CE04KW1A220M	ELECTRO 22UF 10WV		
C17 ,18		*	C90-3396-05	ELECTRO 47UF 35WV		
C19			CE04KW1H102M	ELECTRO 1000UF 50WV		
C20			CK45FF1H103Z	CERAMIC 0.010UF Z		
C21			CE04KW1A220M	ELECTRO 22UF 10WV		
C22 ,23		*	C90-3396-05	ELECTRO 47UF 35WV		
C24			CE04KW1H102M	ELECTRO 1000UF 50WV		
C25 -30			CE04KW2A100M	ELECTRO 10UF 100WV		
C31			C91-0769-05	CERAMIC 0.01UF K		
J1	1B		E06-0806-05	CYLINDRICAL RECEPTACLE(REMOTE)		
⚠ F3 ,4			F05-1628-05	FUSE (UL) (250V 1.6A)		
CN5 ,6			J13-0075-05	FUSE CLIP		
CN11,12			J13-0075-05	FUSE CLIP		
J2 -6			J11-0098-05	WIRE CLAMPER		
R1 -4			RD14NB2E2R2J	RD 2.2 J 1/4W		
R5 ,6			RD14NB2E221J	RD 220 J 1/4W		
R9 -12			RD14NB2E391J	RD 390 J 1/4W		
R15 ,16			RD14NB2E102J	RD 1K J 1/4W		
R17 ,18			RD14NB2E471J	RD 470 J 1/4W		
R31 -34			RD14NB2E2R2J	RD 2.2 J 1/4W		
R35 ,36			RD14NB2E221J	RD 220 J 1/4W		
R39 -42			RD14NB2E391J	RD 390 J 1/4W		
R45 ,46			RD14NB2E102J	RD 1K J 1/4W		
R47 ,48			RD14NB2E471J	RD 470 J 1/4W		
R61 -64			RD14NB2E2R2J	RD 2.2 J 1/4W		
R65 ,66			RD14NB2E221J	RD 220 J 1/4W		
R69 -72			RD14NB2E391J	RD 390 J 1/4W		
R75 ,76			RD14NB2E102J	RD 1K J 1/4W		
R77 ,78			RD14NB2E471J	RD 470 J 1/4W		
⚠ R103,104			RD14NB2E122J	RD 1.2K J 1/4W		
R109			RD14NB2E103J	RD 10K J 1/4W		
R110			RD14NB2E222J	RD 2.2K J 1/4W		
R125			RD14NB2E4R7J	RD 4.7 J 1/4W		

L:Scandinavia K:USA P:Canada
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Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

× New Parts
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Teile ohne **Parts No.** werden nicht gellefert.

No. 6

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
R128			RS14KB3D681J	FL-PROOF RS 680 J 2W		
R130			RS14KB3A182J	FL-PROOF RS 1.8K J 1W		
⚠ R137			RS14KB3D271J	FL-PROOF RS 270 J 2W		
R145			RS14KB3D271J	FL-PROOF RS 270 J 2W		
⚠ S1 -4	1A,1B		S79-0004-05	THERMAL SWITCH		
D1 -8			HSS104A	DIODE		
D1 -8			1SS131	DIODE		
D9			HZS24N(B)	ZENER DIODE		
D9			RD24ES(B)	ZENER DIODE		
D10 -13			HSS104	DIODE		
D10 -13			1SS133	DIODE		
D14			HZS6.2N(B2)	ZENER DIODE		
D14			RD6.2ES(B2)	ZENER DIODE		
D15 ,16			HSS104A	DIODE		
D15 ,16			1SS131	DIODE		
D17			HZS6.2N(B2)	ZENER DIODE		
D17			RD6.2ES(B2)	ZENER DIODE		
D18			HZS24N(B)	ZENER DIODE		
D18			RD24ES(B)	ZENER DIODE		
⚠ D19 ,20			KBP02ML-6127	DIODE		
D21 -32			HSS104A	DIODE		
D21 -32			1SS131	DIODE		
IC1			UPC1237HA	IC(POWER AMP)		
Q1		*	2SC3944A(R,S)	TRANSISTOR		
Q2		*	2SA1535A(R,S)	TRANSISTOR		
Q3			2SC1845(F,E)	TRANSISTOR		
Q4		*	2SC3944A(R,S)	TRANSISTOR		
Q5		*	2SA1535A(R,S)	TRANSISTOR		
Q6			2SC1845(F,E)	TRANSISTOR		
Q7		*	2SC3944A(R,S)	TRANSISTOR		
Q8		*	2SA1535A(R,S)	TRANSISTOR		
Q9			2SC1845(F,E)	TRANSISTOR		
Q10		*	2SC3944A(R,S)	TRANSISTOR		
Q11		*	2SA1535A(R,S)	TRANSISTOR		
Q12			2SC1845(F,E)	TRANSISTOR		
Q13		*	2SC3944A(R,S)	TRANSISTOR		
Q14		*	2SA1535A(R,S)	TRANSISTOR		
Q15			2SC1845(F,E)	TRANSISTOR		
Q16		*	2SC3944A(R,S)	TRANSISTOR		
Q17		*	2SA1535A(R,S)	TRANSISTOR		
Q18			2SC1845(F,E)	TRANSISTOR		
Q19			2SA1048(Y,GR)	TRANSISTOR		
Q19			2SA1309A(Q,R)	TRANSISTOR		
Q20			2SC3244	TRANSISTOR		
Q21			2SA992(F,E)	TRANSISTOR		
Q22 -24			2SC2458(Y,GR)	TRANSISTOR		
Q22 -24			2SC3311A(Q,R)	TRANSISTOR		
Q25 -28			2SA1048(Y,GR)	TRANSISTOR		
Q25 -28			2SA1309A(Q,R)	TRANSISTOR		
Q29 ,30			2SD2012	TRANSISTOR		
Q29 ,30			2SD2061	TRANSISTOR		
Q31			2SC3244	TRANSISTOR		
Q32			2SC2458(Y,GR)	TRANSISTOR		
Q32			2SC3311A(Q,R)	TRANSISTOR		

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No.7

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
Q35			2SD2012	TRANSISTOR		
Q35			2SD2061	TRANSISTOR		
Q36			2SC2458(Y,GR)	TRANSISTOR		
Q36			2SC3311A(Q,R)	TRANSISTOR		

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SPECIFICATIONS

KM-X1

AUDIO SECTION

Rated power output (FTC)

STEREO MODE

130 watts per channel minimum RMS, both channels driven, at 8Ω from 20 Hz to 20 kHz with no more than 0.03 % total harmonic distortion.

SURROUND MODE

Front
100 watts per channel minimum RMS, both channels driven, at 6 Ω from 20 Hz to 20 kHz with no more than 0.03% total harmonic distortion.

Center
100 watts per channel minimum RMS, both channels driven, at 6 Ω from 20 Hz to 20 kHz with no more than 0.03% total harmonic distortion.

Rear (Surround)
100 watts per channel minimum RMS, both channels driven, at 6 Ω from 20 Hz to 20 kHz with no more than 0.03% total harmonic distortion.

Sub woofer
100 watts per channel minimum RMS, both channels driven, at 6 Ω from 20 Hz to 20 kHz with no more than 0.03% total harmonic distortion.

Input sensitivity/impedance
MAIN IN 1V/33kΩ

Total harmonic distortion
STEREO MODE
..... 0.0015 % (1 kHz, 65 W, 8 Ω)

Frequency response
MAIN IN ..... 10 Hz-100 kHz, +0 dB, - 3 dB

Signal to noise ratio
(IHF A)
MAIN IN ..... 105 dB

GENERAL

Power consumption ..... 7 A

Dimensions ..... W:440 mm (17-5/16")
H: 161.5 mm (6-3/8")
D: 380 mm (14 15/16")

Weight (Net) ..... 20 kg (44.1 lb)